

# Facility Facts

Facility Engineering Associates Informational Newsletter



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20 Years of Making a Difference  
in the Built Environment

## Celebrating 20 Years with FEA

2013 will mark the 20 Year Anniversary for FEA. We are excited to celebrate this important milestone with a retrospect of our 20 years in business and 2012 in review. We have come a long way from our simple beginnings in a small townhome in Fairfax, Virginia having evolved into a national corporation with personnel in offices across the country, serving clients around the world.

We started as a small company with big dreams and a mission *to bring the best in engineering and facilities management practices and knowledge consulting to our clients.* After all these years of working to promote this core mission on projects of all sizes - from small, local clients to large, multi-national entities - we have always endeavored to execute this mission statement to the best of our abilities.

Like all companies, we have celebrated triumphs and endured uncertain times, while also watching industry changes and technological innovations advance at an ever accelerated pace. We consistently strive to bring the best and most up-to-date consulting expertise to you, encased within our ever expanding range of services. We believe our employees are some of the best in the industry, leading the way as thought leaders in their fields of expertise, offering the most current certifications and an extensive knowledge base. We also believe our talented staff, and you, our valued clients, are the key components of FEA's continued success. Considering this, we wish to issue a special "Thank You" to all of you!

We hope that with all of our past, present, and future efforts, we can continue to bring our best efforts to you, and we look forward to another 20 years with all of you. Here is wishing you the best in 2013!

### 2012 In Review

2012 was an exciting time for FEA, with an expanded range of projects, varied opportunities, and increased growth. We continued to expand our knowledge base and share that knowledge through a variety of educational opportunities, with such industry leaders as IFMA, ASHRAE, George Mason, and various others. Within the

wide range of projects started and completed in 2012, we provided a variety of services - from facility condition assessments and management system consulting to LEED certification and environmental services. We hope by offering a review of some of these key services, it will bring into focus not only how rapidly the built environment is changing, but also how



FEA Founders c. 1995

we in the consulting industry are constantly changing and adapting to these emerging needs. Our ongoing mission is to achieve the objectives that are increasingly important to the world and business. To name a few - providing the means for buildings to be "greener" and last longer; improving operating processes, so facility managers and owners can achieve greater productivity; providing a safe and productive environment for tenants and employees; plus the various other needs that the consulting industry will be addressing in the upcoming years. For the year in review, we offer:

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## Wyoming School District Condition Assessment

The Wyoming Schools Facilities Commission required the creation and implementation of a training program to assess all schools in the state of Wyoming (23 million sq. ft.). In conjunction with the assessment, they required the development of a prioritization asset management program that would be defensible under a court order from the Supreme Court of Wyoming and could be

put in place in less than six months. The project was divided into three phases, with Phase 1 - encompassing published assessment methodologies and the decision to use a particular methodology approach; Phase 2 - utilization of commission staff to develop facility condition assessment standards and forms for use; and Phase 3 - to perform a verification assessment of selected facilities. The project was completed and provided a useful model to work with future school systems for condition assessments and methodologies.

## GSA (3TI)

The General Services Administration (GSA) embarked on a process to develop requirements and implement a national computerized maintenance management system (CMMS). FEA was engaged to provide assistance to the project under 3T International (3TI). This effort spearheaded a collaborative approach between GSA, 3TI, and FEA, and involved several parts, including validation of equipment inventories. FEA's assessors visited 572 buildings in a span of 12 months, with 300 more to be done in the future. FEA has been instrumental in providing assistance to GSA's National CMMS Core Team in developing the minimum requirements for a National



CMMS. Some general requirements for this include: what to inventory; nomenclature; criticality and risk prioritizations; standardization of all the data; equipment system classifications; and preventative maintenance.

FEA has also identified deficiencies in asset management data throughout the regions and given guidance on achieving a standardized asset management system. The end result will be one national CMMS that captures all existing GSA inventories into one standardized database.

## Embassy Suites Roof Evaluation



FEA recently was asked to perform a roof evaluation at a hotel facility in the San Francisco area. The client contacted us during the winter of 2011 stating they had water intrusion into the upper floors of the hotel.

The roof was replaced during the summer months of 2011 without a consultant being involved. No additional

insulation was installed, nor was a separate vapor retarder installed, as the roof had a lightweight insulating concrete arch layer. The new thermoplastic polyolefin (TPO) roof qualified as a Cool Roof and the client believed they had received a good value for their capital. However, by December 2011 the building personnel noticed wet walls and water leaks in guest rooms on the top floor of the building. It was assumed that the TPO membrane had failed; however, the installing contractor performed water tests by plugging drains and flooding the area with water and found that the membrane was intact. The contractor then performed roof cores in selected areas, and discovered that the underside of the membrane and LIC was water soaked (See Photo). He could not offer an explanation of the problem, nor provide a resolution.

After checking design criteria for the San Francisco area, FEA determined that the cause of the water infiltration was due to condensation below the membrane. Moisture laden air was moving freely thru the roof assembly (including the insulating concrete) and was condensing when it came in contact with the bottom of the TPO membrane. When the TPO membrane reached the dew point temperature (during

## About Facility Facts



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Facility Facts is an informational periodical issued quarterly by Facility Engineering Associates' staff to share innovative techniques, case studies, trends and general information on issues important to our clients.

Facility Engineering Associates is a national consulting engineering practice specializing in existing facilities and infrastructure. Our expertise is in the areas of: • Condition Assessment • Facility Asset Management • Repair and Restoration • Energy Management • Environmental • Sustainability

These articles are for general information only, and may not fit your specific situation. If you would like to reprint an article or would like more information about a specific challenge you face, please contact:

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colder months), the moisture in the air condensed at this location, soaked the assembly, and ran back into the building through penetrations. The contractor had not considered this possibility, and the previous roofing system did not have the problem due to the configuration of the system. By providing a reasoned evaluation and appropriate design information, FEA solved the problem, and building ownership is now in the process of modifying the roofing system to solve a problem that could have been easily averted earlier in the process.



## VSP Vision Care Headquarters LEED Platinum Certification

FEA led a multi-service Leadership in Energy and Environmental Design (LEED) for Existing Buildings (EB) project for one of the VSP buildings at their main campus in Rancho Cordova, California. Constructed in 1992, the building encompasses approximately 152,000 square feet. FEA worked closely with the VSP facilities team to identify policies and practices that would help them reach their goal of LEED-EB Platinum certification, as well as enhance the overall performance of their facility.

FEA's scope included assessing the building's status for certification under the United States Green Building Council (USGBC)

LEED-EB rating system. FEA validated baseline energy use information and benchmarked the energy performance with ENERGY STAR, while also performing a Level 1 energy audit to identify energy conservation measures. We worked with VSP to develop tools to track and measure energy use, water use, waste stream, purchases, and the effects of implemented measures on building occupants. Ultimately, HQ4 achieved the LEED Platinum certification in March of 2012.

## FEA to host the COBie Challenge for Facility Managers at NFMT in 2013

To help facility management teams further utilize CMMS, CAFM, and IWMS software, standards such as the Construction Operations Building Information Exchange (COBie) can be used. The 2013 COBie Challenge for Facility Managers will be part of the National Facilities Management and Technology (NFMT) Conference, scheduled for March 12, 2013, in Baltimore, MD. For more information on this event or specific requirements, please contact Angela.Lewis@feapc.com.

## Looking Forward - The Year to Come (2013)

FEA is hopeful about what the future holds for the FM community, as this is an exciting time for our industry. We are renewing our commitment to our clients by applying our talents to enabling you to meet these emerging trends with confidence. (See Figure 1)

## Emerging Trends for 2013

### High Performance Buildings

- Sustainability related operations
- Information Management

### Facility Reinvestment

- New vs. Existing building environment

### High-Performance FM Organizations

- Talent development gap

### Performance Measurement

- Performance based contracts
- Contract governance focus

### FM Technologies

- BIM (Building Information Management)
- GIS (Geographic Information Systems)
- RFID (Radio Frequency Identification)
- IWMS (Integrated Workplace Management System)
- PT&I (Predictive Testing & Inspection)
- AFDD (Automated Fault Detection & Diagnostics)

### Future Workplace

### Preparedness and Resiliency

Figure 1 – Emerging Trends

## FEA Announcements

**Blaik Ritchie** joined the Dallas office as Regional Operations Manager

**Lumber Marsey** joined the Dallas office as a Roofing Technician

**Scott Higgins** joined the Fairfax office as Government Business Development Manager

**Mike Payne** joined the Fairfax office as a Staff Engineer

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## FEA on the Road

Fairfax, VA

### Facility Management Professional (FMP) Credential Courses

The courses offered for Spring 2013. Please visit [ocpe.gmu.edu/ifmafmp.html](http://ocpe.gmu.edu/ifmafmp.html) for more information.

February 1 & 2 –  
FMP Operations & Maintenance

April 12 & 13 –  
FMP Finance & Business Essentials

March 1 & 2 –  
FMP Project Management

May 17 & 18 –  
FMP Leadership & Strategy Essentials

### March 12-14 – Baltimore, MD Building Operations Management (NFM&T) Tradeshow

Baltimore Convention Center  
Be sure to visit us at Booth #2080

### March 14-15 – Fairfax, VA Certified Facility Manager (CFM) Review

For registration: [ifmacap.org/events](http://ifmacap.org/events)

### March 23 – Washington, DC WMCCAI Tradeshow

Washington DC Convention Center  
Be sure to visit us at Booth #2013

### April 2-4 – Los Angeles, CA Facility Fusion

Speaking will be: Angela Lewis, Chris Hodges, & Laurie Gilmer  
Be sure to visit us at Booth #406



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